

CLAIMS

What is claimed is:

1. A method comprising:

recognizing that a primary device with a storage location has been placed in a power saving mode; and

switching file access control of the primary device's storage location from the primary device to an audio device after the primary device has been placed in a power saving mode.
2. The method of claim **1** further comprising, the primary device sending a signal to the audio device to alert the audio device that the primary device has been placed in a power saving mode.
3. The method of claim **1** further comprising, switching control of the primary device's storage location and the primary device's CODEC to the audio device upon a user request, while the primary device is not in a power saving mode.
4. A method as in claim **1**, wherein the audio device is installed within the primary device.
5. A method as in claim **1**, wherein the audio device is external to the primary device.

6. A method as in claim 5, wherein the audio device is coupled to the primary device through a USB connection.

7. A method as in claim 1, wherein the primary device comprises a laptop computer.

8. A method as in claim 1, wherein the CODEC is a combination of hardware and software that converts analog sound, speech and/or video to digital code (analog to digital) and also converts digital code to analog sound, speech and/or video (digital to analog).

9. A method as in claim 1, wherein the CODEC is hardware that converts analog sound, speech and/or video to digital code (analog to digital) and also converts digital code to analog sound, speech and/or video (digital to analog).

10. A method as in claim 1, wherein the CODEC is software that converts analog sound, speech and/or video to digital code (analog to digital) and also converts digital code to analog sound, speech and/or video (digital to analog).

11. A method comprising:

searching a storage location for a digital signal processor (DSP) boot program;

providing the DSP with the boot program;
searching for updates to the DSP boot program; and
providing the DSP with the updates for the DSP boot program.

12. A method as in claim **11** further comprising searching a storage location for a DSP boot program with a micro-controller.

13. A method as in claim **11** further comprising searching for updates to the DSP boot program with a micro-controller.

14. A method as in claim **11** further comprising searching a ROM for the DSP boot program.

15. A method as in claim **11** further comprising searching an SRAM for the DSP boot program.

16. A method as in claim **11** further comprising searching an SRAM for updates to the DSP boot program.

17. A method as in claim **11** further comprising searching an external ROM for updates to the DSP boot program.

18. A method of processing an audio file located on a primary device's storage location comprising:

- accepting a user request at a keypad;
- converting the user request to an entry code;
- transmitting the entry code to an audio device;
- determining the function of the entry code at the audio device; and
- processing the audio file on the primary device's storage location

according to the function determined at the audio device.

19. The method of claim **18** wherein processing the audio file on the primary device's storage location according to the function determined at the audio device comprises:

- accepting a user request to play an audio file from a storage location, where the storage location is attached to the primary device;
- transmitting the user request to play an audio file to a micro-controller;
- determining the format, name, and location of the audio file for which the play request has been made;
- transmitting the format, name, and location of the audio file to a DSP; and
- notifying the DSP that it is time to start playing the audio file.

20. The method of claim **18** wherein processing the audio file on the primary device's storage location according to the function determined at the audio device comprises:

accepting a user request to record sound to a storage location, where the storage location is attached to the primary device;

transmitting the user request to record sound to a micro-controller;

accepting sound into a microphone;

receiving sound accepted into the microphone into a CODEC;

converting the sound from an analog stream at the CODEC to a digital stream;

transmitting the digital stream from the CODEC to a digital interface;

receiving the digital stream from the digital interface into a DSP;

performing noise cancellation if necessary;

compressing the digital stream if necessary; and

writing the digital stream to a storage location.

21. The method of claim **18** wherein processing the audio file on the primary device's storage location according to the function determined at the audio device comprises:

transferring control of voice input to a primary device's microphone from a primary device to an audio device;

accepting sound into the microphone while an audio file controlled by an audio device is playing from a storage location;

amplifying the voice input at the microphone; and

outputting the voice after it has been amplified through a speaker at the same time the audio file being played is having its sound output through the speaker.

22. A method as in claim **18** further comprising comparing the entry code against a table of functions related to keypad entries when determining the function related to a keypad entry code.

23. A method as in claim **18** wherein the entry code comprises an entry in a table of entry codes, the table of entry codes further including corresponding functions associated with each entry code.

24. A method as in claim **18** wherein the audio file has a CD audio format.

25. A method as in claim **18** wherein the audio file has an MP3 format.

26. A method as in claim **18** wherein the audio file has a WAV format.

27. A method as in claim **18** wherein the audio file has an AAC format.

28. An apparatus comprising:

a micro-controller;

an input device coupled to the micro-controller, to receive user entries to control a primary device's audio device when the primary device is in a power saving state;

an interface to the micro-controller, the interface to provide the micro-controller with access to a storage location, wherein the storage location is coupled to the primary device;

a gateway coupled to the micro-controller;

a DSP coupled to the gateway, the DSP to read user requested files, decode user requested files, and write to user files; and

an output port coupled to the DSP, the output port to transmit a decoded audio stream out of the DSP and receive a digital signal into the DSP.

29. The apparatus of claim **28** wherein the interface is an IDE interface.
30. The apparatus of claim **28** wherein the storage location is a hard drive.
31. The apparatus of claim **28** wherein the storage location is a CD-RW drive.
32. The apparatus of claim **28** wherein the storage location is a flash memory.
33. The apparatus of claim **32** wherein the flash memory is a SmartMedia.

34. The apparatus of claim **28** wherein the primary device is a notebook computer.
35. The apparatus of claim **28** wherein the primary device is an audio jukebox.
36. An apparatus as in claim **28** further comprising a USB interface coupled to the micro-controller.
37. An apparatus as in claim **28** further comprising an I2C master port coupled to the micro-controller.
38. An apparatus as in claim **28** further comprising an I2C slave port coupled to the micro-controller.
39. An apparatus as in claim **28** further comprising a read only memory (ROM) coupled to the micro-controller.
40. An apparatus as in claim **28** further comprising an SRAM coupled to the micro-controller.
41. An apparatus as in claim **28** further comprising an SD flash controller coupled to the micro-controller.

42. The apparatus of claim **28** wherein the micro-controller includes an 8051 micro-controller.
43. An apparatus as in claim **28** further comprising a SmartMedia interface coupled to the micro-controller.
44. An apparatus as in claim **43** wherein the SmartMedia interface is further coupled to the DSP.
45. An apparatus as in claim **28** further comprising an AC link interface coupled to the DSP.
46. An apparatus as in claim **28** further comprising an I2S port coupled to the DSP.
47. An apparatus as in claim **28** wherein the apparatus is a single device.
48. An apparatus as in claim **28** wherein the apparatus is part of a single device.
49. An apparatus as in claim **28** further comprising a device which is external to the primary device.

50. An apparatus as in claim **28** further comprising a device which is internal to the primary device.
51. The apparatus of claim **28** wherein an interface coupled to the micro-controller comprises a plurality of interfaces.
52. The apparatus of claim **28** wherein a storage location comprises a plurality of storage locations.

50. An apparatus as in claim 28 further comprising a device which is internal to the primary device.

51. The apparatus of claim 28 wherein an interface coupled to the micro-controller comprises a plurality of interfaces.

52. The apparatus of claim 28 wherein a storage location comprises a plurality of storage locations.